**IN THE CLAIMS**

1. (Cancelled)

2. (Previously Amended) A rotating machine comprising:

a stator having a plurality of field winding slots;

a plurality of field windings disposed in each of the field winding slots, at least two of the field windings are comprised of:

an outer jacket; and

a plurality of conductive wires disposed within and enclosed by the outer jacket such that longitudinal passages are defined therebetween;

circulation means for circulating a coolant into and from the rotating machine through the longitudinal passages; and

a housing, the housing having a cavity for acceptance of the stator therein, the housing and stator defining first and second plenums at first and second ends of the stator, the coolant entering the rotating machine into the first plenum and exiting the rotating machine from the second plenum.

3. (Original) The rotating machine of claim 2, wherein the at least two field windings having the longitudinal passages further having at least one entry hole in the outer jacket providing communication between the longitudinal passages and the first plenum and at least one exit hole in the outer jacket providing communication between the longitudinal passages and the second plenum, wherein the coolant enters the

longitudinal passages from the first plenum through the at least one entry hole and exits into the second plenum through the at least one exit hole.

4. (Original) The rotating machine of claim 2, wherein the at least two field windings having the longitudinal passages further having an exit hole in the outer jacket which provides communication between the longitudinal passages and the second plenum, the coolant leaving the longitudinal passages through the exit hole into the second plenum for re-circulation into the first plenum, the first and second plenums being connected with an external conduit.

5. (Original) The rotating machine of claim 4, wherein the circulation means comprises a pump disposed in the external conduit between the first and second plenums.

6. (Original) The rotating machine of claim 4, further comprising a heat exchanger disposed in the external conduit between the first and second ends for removing heat from the coolant re-circulated therein.

7. (Previously Amended) The rotating machine of claim 2, wherein each of the plurality of field windings has the outer jacket and longitudinal passages.

8. (Previously Amended) The rotating machine of claim 2, wherein the outer jacket is a flexible elastomer.

9. (Previously Amended) The rotating machine of claim 2, wherein the plurality of conductive wires disposed within the jacket are circular in cross-section.

10. (Previously Amended) A rotating machine comprising:

a stator having a plurality of field winding slots;

a plurality of field windings disposed in each of the field winding slots, at least two of the field windings are comprised of:

an outer jacket; and

a plurality of conductive wires disposed within and enclosed by the outer jacket such that longitudinal passages are defined therebetween; and

circulation means for circulating a coolant into and from the rotating machine through the longitudinal passages, wherein the conductive wires are wound within the outer jacket to form helical shaped longitudinal passages.

11. (Previously Amended) The rotating machine of claim 2, wherein the outer jacket comprises at least one film disposed over the conductive wires.

12. (Cancelled)

13. (Original) A rotating machine comprising:

a stator having a plurality of field winding slots;

a plurality of field windings disposed in each of the field winding slots, the plurality of field windings comprising:

an outer jacket only partially contiguous with walls of the field winding slots; and

a plurality of conductive wires disposed within the outer jacket such that longitudinal passages are defined therebetween; and

circulation means for circulating a coolant into and from the rotating machine through the longitudinal passages.

14. (New) A rotating machine comprising:

a stator having a plurality of field winding slots;

a plurality of field windings disposed in each of the field winding slots, at least two of the field windings are comprised of:

an outer jacket having an entry hole and an exit hole, each formed in a side wall thereof; and

a plurality of conductive wires disposed within and enclosed by the outer jacket such that longitudinal passages are defined therebetween, at least one of the longitudinal passages being in fluid communication with the entry hold and the exit hole; and

circulation means for circulating a coolant into and from the rotating machine through the longitudinal passages.

15. (New) The rotating machine according to claim 14, wherein the outer jacket comprises a plurality of entry holes and a plurality of exit holes distributed around the circumference of the jacket.

16. (New) The rotating machine according to claim 14, wherein the at least two field windings are arranged such that the entry hole is positioned adjacent a first end of the stator, and the exit hold is positioned adjacent an opposite end of the stator.

17. (New) The rotating machine according to claim 14, wherein the entry hole is located on a first loop portion of the field winding, and the exit hold is located on a second loop portion of the field winding.